

Lionville Laboratory, Inc.
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNUHANFORD S04-001 H2545

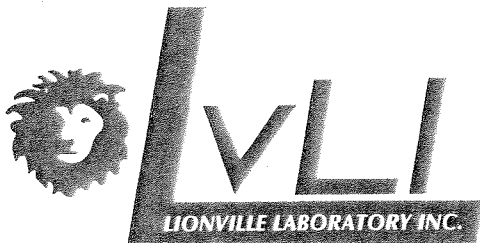
DATE RECEIVED: 07/01/04

LVL LOT # :0407L966

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
B18NW9						
TOTAL ORGANIC CARBON	001	W	04LTC017	03/30/04	07/06/04	07/06/04
B18NX0						
TOTAL ORGANIC CARBON	002	W	04LTC017	03/30/04	07/06/04	07/06/04
B18NX1						
TOTAL ORGANIC CARBON	003	W	04LTC017	03/30/04	07/06/04	07/06/04
B18NX2						
TOTAL ORGANIC CARBON	004	W	04LTC017	03/30/04	07/06/04	07/06/04
TOTAL ORGANIC CARBON	004 REP	W	04LTC017	03/30/04	07/06/04	07/06/04
TOTAL ORGANIC CARBON	004 MS	W	04LTC017	03/30/04	07/06/04	07/06/04

LAB QC:

TOTAL ORGANIC CARBON	MB1	W	04LTC017	N/A	07/06/04	07/06/04
TOTAL ORGANIC CARBON	MB1 BS	W	04LTC017	N/A	07/06/04	07/06/04
TOTAL ORGANIC CARBON	MB1 BSD	W	04LTC017	N/A	07/06/04	07/06/04




Analytical Report

Client: TNU-HANFORD S04-001 H2545
LVL#: 0407L966

W.O.#: 11343-606-001-9999-00
Date Relogged: 07-01-04

INORGANIC NARRATIVE

1. This narrative covers the re-analysis of 4 water samples.
2. The samples were prepared and analyzed in accordance with the method checked on the attached glossary.
3. Sample holding times as required by the method and/or contract were not met as the re-analysis was requested past hold.
4. The method blank was within the method criteria.
6. The Laboratory Control Samples (LCS) were within the laboratory control limits. The duplicate LCS was within the 20% Relative Percent Difference (RPD) control limit.
7. The matrix spike recovery was within the 75-125% control limits.
8. The replicate analysis was within the 20% RPD control limit.
9. I certify that this sample data package is in compliance with SOW requirements, both technically and for completeness, other than the conditions detailed above. Release of the data contained in this hard copy package has been authorized by the Laboratory Manager or a designee, as verified by the following signature.


Iain Daniels
Laboratory Manager
Lionville Laboratory Incorporated

njpl07-966

7/29/04
Date

The results presented in this report relate to the analytical testing and conditions of the samples upon receipt and during storage. All pages of this report are integral parts of the analytical data. Therefore, this report should only be reproduced in its entirety of 10 pages.

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WET CHEMISTRY

METHODS GLOSSARY FOR WATER SAMPLE ANALYSIS

	<u>EPA /600</u>	<u>SW846</u>	<u>OTHER</u>
Acidity	305.1		
___ Alkalinity ___ Bicarbonate ___ Carbonate	310.1		
BOD	405.1		5210B (b)
Ion Chromatography:			
___ Bromide ___ Chloride ___ Fluoride	300.0	9056	
___ Nitrate ___ Nitrite ___ Phosphate	300.0	9056	
___ Sulfate ___ Formate ___ Acetate ___ Oxalate	300.0	9056	
Chloride	325.2	9251	
Chlorine, Residual	330.5 (mod)		
Cyanide, Amenable to Chlorination	335.2	9010B	
Cyanide, Total	335.2	9010B	9014 ILMO4.0 (e)
Cyanide, Weak Acid Dissociable			412 (a) 4500CN-1 (b)
COD	410.4(mod)		5220C (b)
Color	110.2		
Corrosivity by Coupon		1110(mod)	
Chromium VI		7196A	3500Cr-D (b)
Fluoride	340.2		4500-FC
Hardness, Calcium	215.2		
Hardness, Total	130.2		
Iodide			ASTM D19P202 (1)
Surfactant	425.1		
___ Nitrate-Nitrite ___ Nitrate ___ Nitrite	353.2		
Ammonia	350.3		
Total ___ Kjeldahl ___ Organic Nitrogen	351.3		
Total <input checked="" type="checkbox"/> Organic ___ Inorganic Carbon	415.1	9060	
Oil & Grease	413.1	9070	
___ pH ___ pH; paper	150.1	9040B	9041A
Petroleum Hydrocarbons, Total Recoverable	418.1		
Phenol	420.1	420.2	9065 9066
___ Ortho ___ Total Phosphate	365.2		4500-P B C
Salinity			210A (a) 2520 (b)
Settleable Solids	160.5		
Sulfide	376.1		9030B/9034 (acid soluble)
Reactive ___ Cyanide ___ Sulfide		Section 7.3	(___ 9014 ___ 9030B)
Silica	370.1		
Sulfite	377.1		
Sulfate	375.4	9038	
Specific Conductance	120.1	9050A	
Specific Gravity			D5057-90 213E (a)
Synthetic Precipitation Leach		1312	
Total ___ Dissolved ___ Suspended ___ Solids	160 ___ .1 ___ .2 ___ .3		
Total Organic Halides	450.1	9020B	
Turbidity	180.1		
Volatile Solids:			
___ Total ___ Dissolved ___ Suspended	160.4		
Other:		Method:	

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METHOD REFERENCES AND DATA QUALIFIERS

DATA QUALIFIERS

U = Indicates that the parameter was not detected at or above the reported limit. The associated numerical value is the sample detection limit.

* = Indicates that the original sample result is greater than 4x the spike amount added.

ABBREVIATIONS

MB = Method or Preparation Blank.

MS = Matrix Spike.

MSD = Matrix Spike Duplicate.

REP = Sample Replicate

LC = Laboratory Control Sample.

NC = Not calculated.

A suffix of -R, -S, or -T following these codes indicate a replicate, spike or sample duplicate analysis respectively.

ANALYTICAL WET CHEMISTRY METHODS

1. ASTM Standard Methods.
2. USEPA Methods for Chemical Analysis of Water and Wastes (USEPA 600/4-79-020).
3. Test Methods for Evaluating Solid Waste (USEPA SW-846).
 - a. Standard Methods for the Examination of Water and Waste, 16 ed, (1983).
 - b. Standard Methods for the Examination of Water and Waste, 17 ed, (1989)/18ed (1992).
 - c. Method of Soil Analysis, Part 1, Physical and Mineralogical Methods, 2nd ed, (1986).
 - d. Method of Soil Analysis, Part 2, Chemical and Microbiological Properties, Am. Soc. Agron., Madison, WI (1965).
 - e. USEPA Contract Laboratory Program, Statement of Work for Inorganic Analysis.
 - f. Code of Federal Regulations.

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INORGANICS DATA SUMMARY REPORT 07/20/04

CLIENT: TNUHANFORD S04-001 H2545
WORK ORDER: 11343-606-001-9999-00

LVL LOT #: 0407L966

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
=====	=====	=====	=====	=====	=====	=====
-001	B18NW9	Total Organic Carbon	1.5	MG/L	0.50	1.0
-002	B18NX0	Total Organic Carbon	1.4	MG/L	0.50	1.0
-003	B18NX1	Total Organic Carbon	1.6	MG/L	0.50	1.0
-004	B18NX2	Total Organic Carbon	1.5	MG/L	0.50	1.0

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INORGANICS METHOD BLANK DATA SUMMARY PAGE 07/20/04

CLIENT: TNUHANFORD S04-001 H2545
WORK ORDER: 11343-606-001-9999-00

LVL LOT #: 0407L966

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
=====	=====	=====	=====	=====	=====	=====
BLANK10	04LTC017-MB1	Total Organic Carbon	0.50 u	MG/L	0.50	1.0

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INORGANICS ACCURACY REPORT 07/20/04

CLIENT: TNUHANFORD S04-001 H2545
WORK ORDER: 11343-606-001-9999-00

LVL LOT #: 0407L966

SAMPLE	SITE ID	ANALYTE	SPIKED SAMPLE	INITIAL RESULT	SPIKED AMOUNT	%RECOV	DILUTION FACTOR (SPK)
-004	B18NX2	Total Organic Carbon	6.7	1.5	5.0	105.4	1.0
BLANK10	04LTC017-MB1	Total Organic Carbon	5.1	0.50u	5.0	102.7	1.0
		Total Organic Carbon	5.2	0.50u	5.0	104.1	1.0

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INORGANICS DUPLICATE SPIKE REPORT 07/20/04

CLIENT: TNUHANFORD S04-001 H2545
WORK ORDER: 11343-606-001-9999-00

LVL LOT #: 0407L966

SAMPLE	SITE ID	ANALYTE	SPIKE#1	SPIKE#2	%DIFF
			%RECOV	%RECOV	
BLANK10	04LTC017-MB1	Total Organic Carbon	102.7	104.1	1.4

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INORGANICS PRECISION REPORT 07/20/04

CLIENT: TNUHANFORD S04-001 H2545
 WORK ORDER: 11343-606-001-9999-00

LVL LOT #: 0407L966

SAMPLE	SITE ID	ANALYTE	INITIAL RESULT	REPLICATE	RPD	DILUTION FACTOR (REP)
=====	=====	=====	=====	=====	=====	=====
-004REP	B18NX2	Total Organic Carbon	1.5	1.4	3.2	1.0

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

Client <u>TNU Hartford SO4-001</u>				Refrigerator #															
Est. Final Proj. Sampling Date				#/Type Container	Liquid														
Project # <u>11343-606-001-9999-00</u>					Solid														
Project Contact/Phone #				Volume	Liquid														
Lionville Laboratory Project Manager <u>OJ</u>					Solid														
QC Spec <u>Del Std</u> TAT <u>7 Days</u>				Preservatives															
Date Rec'd <u>7/1/04</u> Date Due <u>7/8/04</u>				ANALYSES REQUESTED →		ORGANIC					INORG								
						VOA	BNA	Pes/PCB	Herb	TOC					Metal	N			
						Lionville Laboratory Use Only													
MATRIX CODES:				Lab ID	Client ID/Description	Matrix QC Chosen (✓)	Matrix	Date Collected	Time Collected										
S - Soil SE - Sediment SO - Solid SL - Sludge W - Water O - Oil A - Air DS - Drum DL - Drum L - EP/TCLP WI - Wipe X - Other F - Fish										MS	MSD								
				001	B18NW9		W	3/30/04	1100										
				002	X0		I	I	I										
				003	X1		I	I	I										
				004	X2		I	I	I										

Special Instructions:

Relog of 0404L207-1-4A

DATE/REVISIONS:

- _____
- _____
- _____
- _____
- _____
- _____

Lionville Laboratory Use Only

- | | |
|-------------------------------|----------------------------|
| Samples were: | Tamper Resistant Seal was: |
| 1) Shipped _____ or | 1) Present on Outer |
| Hand Delivered _____ | Package Y or N |
| Airbill # _____ | 2) Unbroken on Outer |
| | Package Y or N |
| 2) Ambient or Chilled | 3) Present on Sample |
| | Y or N |
| 3) Received in Good | 4) Unbroken on |
| Condition Y or N | Sample Y or N |
| 4) Samples Properly Preserved | COC Record Present |
| Y or N | Upon Sample Rec't |
| | Y or N |
| 5) Received Within | Cooler |
| Holding Times | Temp. _____ °C |
| Y or N | |

 Discrepancies Between
 Samples Labels and
 COC Record? Y or N
 NOTES:

Relinquished by	Received by	Date	Time
Relog			

Relinquished by	Received by	Date	Time